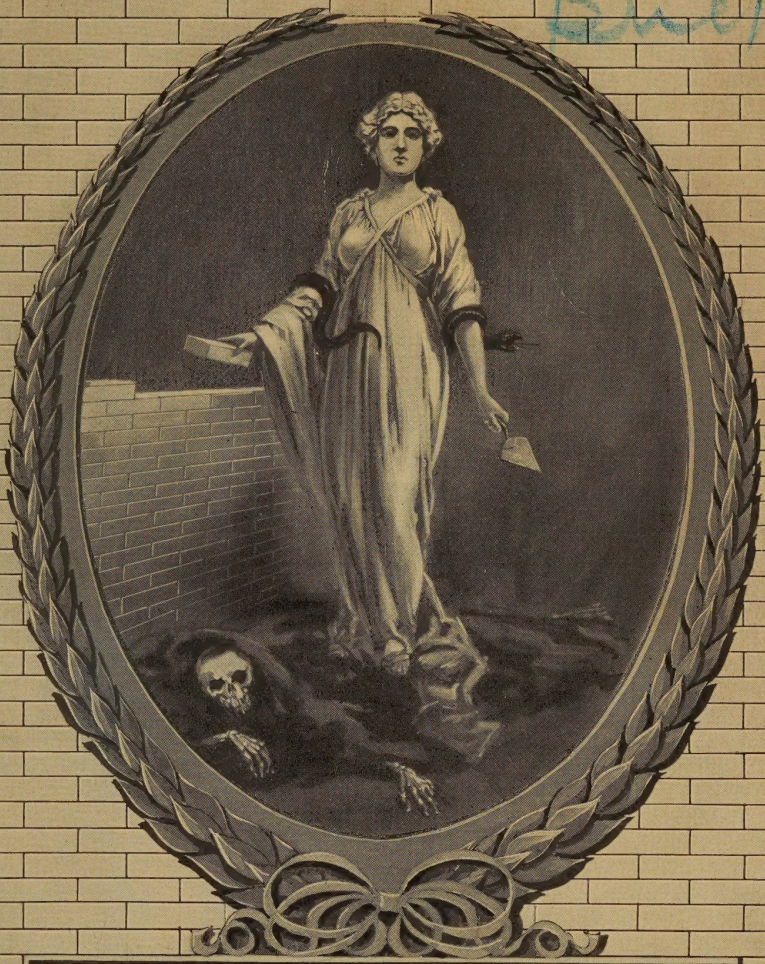
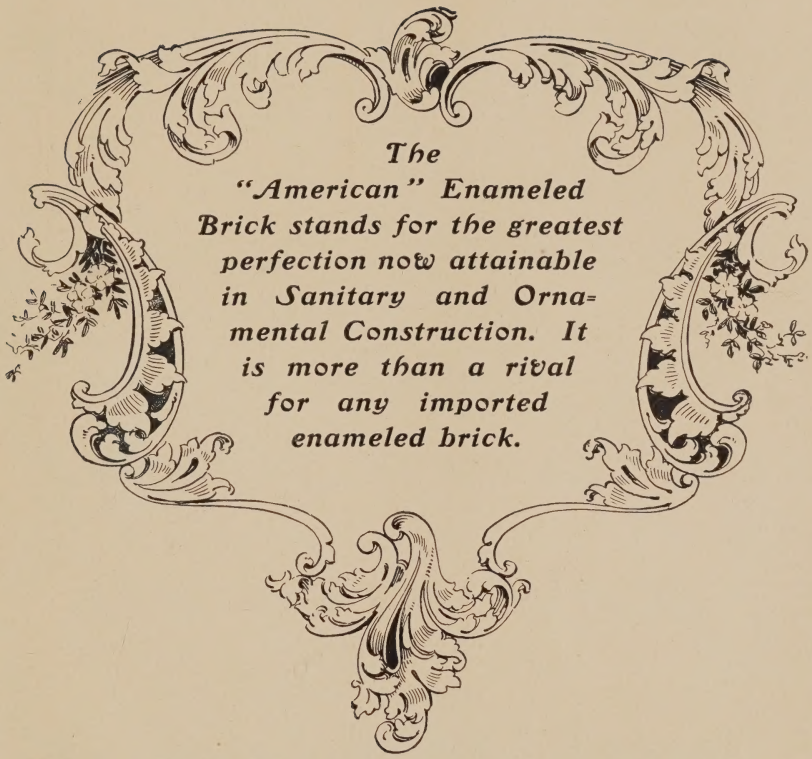
Brick



CATALOGUE STANDARD COLORS & SIZES ENAMELED BRICK

AT
820
Am354
1901


The
"American" Enameled
Brick stands for the greatest
perfection now attainable
in Sanitary and Orna-
mental Construction. It
is more than a rival
for any imported
enameled brick.

Second Edition Catalogue, 1901.

CATALOGUE

...OF...

Standard Colors, Sizes and Shapes of

ENAMELED BRICK

...AND...

PATENTED SPECIALTIES, VIZ:

ENAMELED INTERLOCKING WALL TILE

With L SHAPED RETURN—Avoids continuous corner beads and is guaranteed proof against pulling out or unsetting.

ENAMELED SUBWAY TILE

FOR FACING WALLS OF SUBWAYS.

ENAMELED BEAM COVERS

With Skew Back and Soffit Tiles to cover I beams, single, compound, or built up girders. . . . . .

American Enameled Brick and Tile Co.,

(Incorporated 1893)

1 Madison Avenue, New York.

J. FRANCIS BOORAEM,
Secretary and Treasurer,
1 Madison Ave., - N. Y.

BERNARD JACQUART,
Superintendent,
South River, - - N. J.

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AMERICAN ENAMELED BRICK AND TILE CO.

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INTRODUCTION

THE origin of ceramic industry is shrouded in prehistoric mystery. Ages before the Children of Israel were compelled to make bricks without straw, some savage was the first to fashion a rude bowl of clay. He baked it in the sun, and as he took his first drink from it he must have regarded it as a luxury. In fact, he had made "the struggle for existence" just a little easier. Self-preservation being his chief end, he soon found that by the aid of fire, hard weapons could be made from clay, which gave him advantage over hostile beings that would take his life.

From this crude beginning, slowly, by increments almost as small as those left by generations of coral insects, the industry advanced. The restless spirit of progress would not leave man content with a dwelling built of pieces of clay baked in the sun. He struggled constantly for more durable and accurate results that would make home more habitable.

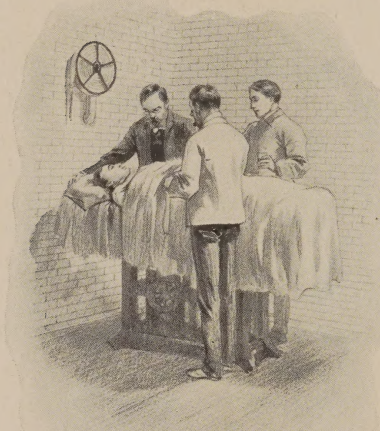
Art soon laid her finger upon the industry and dictated beautiful forms and colors. The story is a long and interesting one—too long to be recounted here. It shows, as do all stories of human progress, that the luxuries of to-day are the necessities of to-morrow. Most of the Colonial mansions that were the "fine houses" of our American forefathers were built of common bricks imported from the mother country. What man, even of moderate means, to-day would be content to use such bricks? And why should he, since he can now get bricks made at home that are far superior to anything he could import from abroad?

The most marked advance in brick-making during the nineteenth century has been along the line of applying the beautiful coloring and glazed finish of pottery to the surface of the brick. This was first successfully accomplished commercially in England, but now the "AMERICAN" Enameled Brick equals, if not surpasses, the English product in quality—not to mention patented shapes and features which make our bricks the only feasible material for use in the varied conformations made necessary by modern structural iron work.

The successful manufacture of enameled brick has greatly extended the use of brick work, not only for artistic effects, but on the utilitarian side where bricks have heretofore been impossible.

The most notable development in the usefulness of bricks has been for sanitary construction. The more recent progress in surgery and medicine has taught mankind the lesson of cleanliness. Having learned the lesson, he finds the glassy surface of the enameled brick affords the very best and easiest means of obtaining cleanliness.

Almost innumerable are the different purposes to which enameled bricks are adapted for construction at once sanitary and ornamental. Perhaps the most obvious one is that in the operating rooms and wards of hospitals, where they serve a double purpose. They render available the maximum amount of light in the room, and they make possible, as no other material can, the maintenance of aseptic conditions. In fact, the use of enameled brick has done wonders in making our public institutions cheerful and healthful. *Prisons*, *poor-houses*, *soldiers'* and *sailors' homes*, *schools*, etc., which formerly admitted frightful conditions of gloom and disease, are now built on more humane principles, because the obvious means for doing so are at hand. Those interested in *model tenements* and the construction of clean, cheerful dwellings for the poor, turn naturally to "AMERICAN" Enameled Brick as the best means for accomplishing their ends.

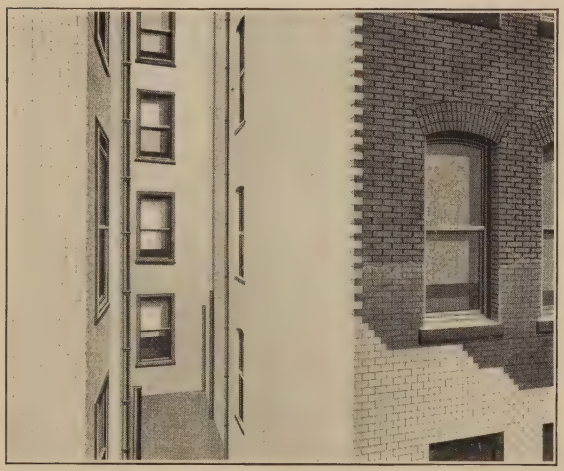


In modern buildings in cities, where the tendency is to encroach more and more upon every available foot of

ground, these bricks suggest themselves as the best possible lining for light-shafts and the rears of buildings. They bring in light without disagreeable glare, and make it possible to keep the air-shafts and cellars dry and clean.

By means of our patented Interlocking Tiles, described on pages 25 and 26, the faces of brick walls already erected may be transformed into sanitary, light-reflecting surfaces.

In light-shafts and elevator-shafts these bricks are already very extensively used. They should be universally employed in large cities for the adjacent side and rear walls and cellars of apartment houses, tenements, and also on walls of private dwellings where yards are small and the walls nearer together than they should be. The side walls of extensions, if built of enameled brick or lined with our Interlocking Tiles, would throw light into many a dining room and make the lunch hour more cheerful, without artificial light.



By mutual arrangement owners may secure even more light in

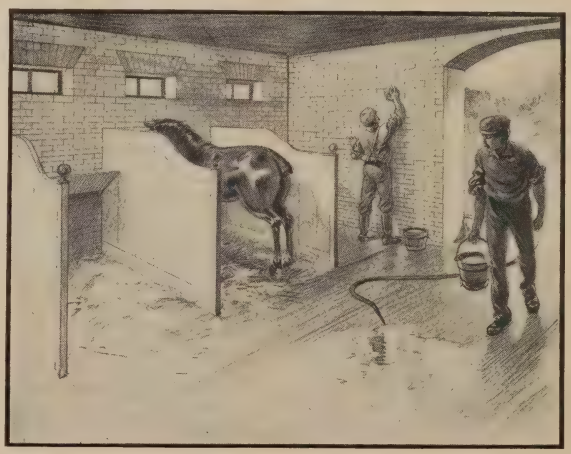
this way than by use of unsightly prismatic windows, which spoil outside appearances of many office buildings. Common porous brick walls absorb moisture, collect dust and germs, only to pass them inside on the draught through open windows to those seeking air within. Enameled brick minimizes these dangers and, consequently, facilitates rental in the same way that modern sanitary plumbing does.

To the householder, whether rich or poor, these materials specially appeal for use in the bath-room, the kitchen, the laundry, the cellar, or other rooms where light and cleanliness are so desirable and so hard to attain under any but the most favorable conditions. They are the ideal material for stable construction, where keeping things clean means so much in health for man and beast.

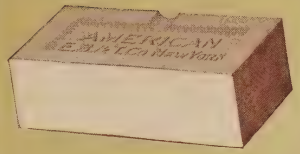
To the dairyman, the butcher, the fish dealer, the brewer, to all who deal in food products, "AMERICAN" Enameled Brick needs no argument. It is rapidly becoming an essential.

So we might go down the long list and fill pages with uses to which this wonderfully simple product is best adapted. A perusal of the following pages cannot fail to suggest many applications for decorative work of the very highest type, too numerous to touch on here. (See pages 39 to end.)

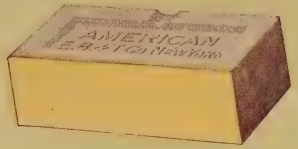
In regard to the expense of "AMERICAN" Enameled Brick, it should be borne in mind that, as against other material (inferior in decorative and hygienic possibilities), it will save its first cost many times in the small labor of cleaning and the elimination of painting and repairs.



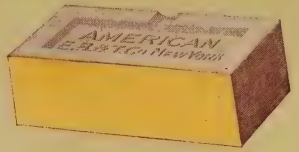
AMERICAN ENAMELED BRICK AND TILE CO., NEW YORK.



WHITE 101



IVORY 201



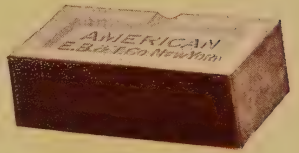
CREAM 301

LIGHT RED-BROWN 401

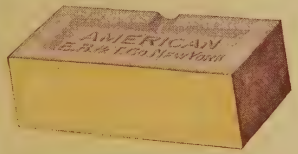
DARK RED-BROWN 501

LIGHT TEAPOT-BROWN 601

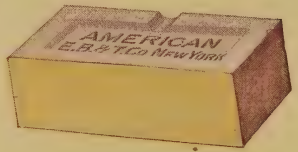
DARK TEAPOT-BROWN 701



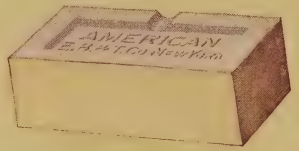
CHOCOLATE 801



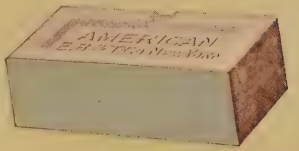
LIGHT FRENCH GREY 901



DARK FRENCH GREY 1001



LIGHT BLUE 1101



ROBIN'S EGG BLUE 1201

DARK BLUE 1301

LIGHT GREEN 1401

SAGE GREEN 1501

BLACK GREEN 1601

MOULDED SHAPES FOR ENAMELED BRICK

ARCHITECTS, builders and owners who have not given it special thought, seldom realize the importance of a thorough knowledge of this subject, and the necessity for its careful consideration over the draughting board at the time the details of construction are conceived. Many have had to suffer delays resulting from failure on the part of manufacturers to successfully produce designs on time in strictly first quality, without crack or spall of any kind. This would have been obviated had they been able to take advantage of the long experience we have had in this one department of our business. Our experience dates from 1895, when we began to successfully produce material equal to the imported product, which used to hold the market. It has taught us many points of great value, which guide us in the choice of special shapes along lines that will save builders delay and relieve us from the loss and humiliation of non-delivery at the time promised.

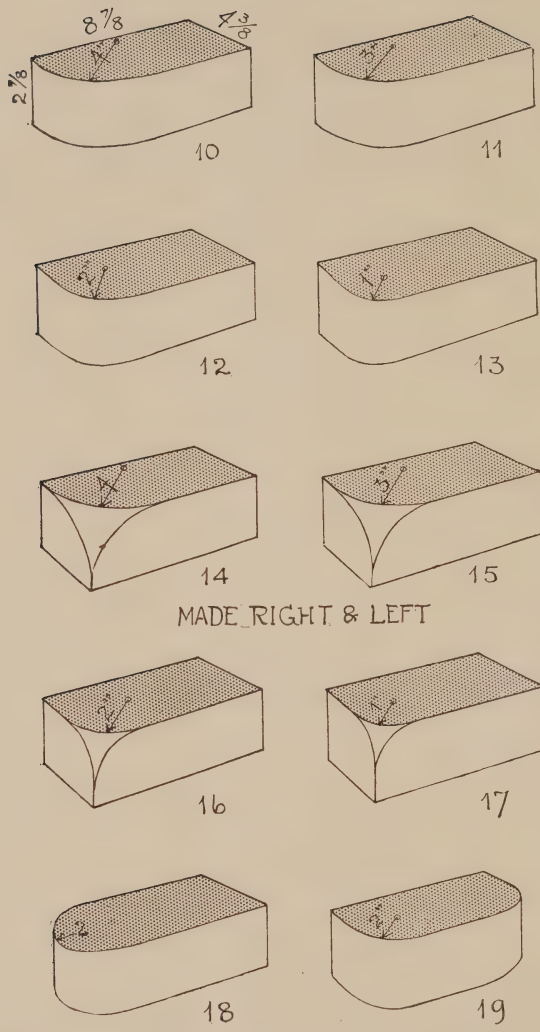
In the following pages we have purposely avoided great variety of fancy ornamentation. Our bricks are not terra cotta with transparent surface glazes, nor enameled terra cotta, nor brick made by the dry process and enameled just before the second firing. They are enameled brick, made by the mud process in one fire, and as such they are free from the underglaze, cracks and crazes, which are ever present on bricks made by other methods. Our special shapes are chosen with the idea of reducing to a minimum the danger of cracking and spalling of the irregular surfaces, caused by irregular shrinkage they produce in the body of brick.

Stock goods, such as stretchers and returns, offer no difficulties not easily overcome, since they are uniform surfaces with uniform strains. Special moulded shapes are always an enigma when untried, and frequently remain so, so far as the power of avoiding the troubles they give, although an explanation of the cause is usually easy to find. In casting of metals, re-entrant angles must be avoided if success is to be secured. So also (in clay enameled) are the combinations of some curves to be avoided, as radii of curved surfaces bear certain relations to other dimensions of the brick and to the internal stresses of the shrinking clay.

The following ten pages show designs that we recommend as being most satisfactory in manufacturing results, though we cannot guarantee that we will at no time have unsuccessful results in an effort to produce them. The last cut shows some applications of these designs for general ornamental purposes. Follow these and save time, mutual expense and trouble. We try to keep a stock of these on hand, in standard colors and in English and American sizes.

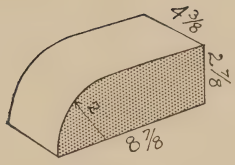
We will try on orders of moderate size, or on larger orders, if ample time is given, to match in shade the moulded and stretcher stock on any order, but cannot always guarantee to uniformly shade shipments of specials.

N. B.—Uniform shading of stretchers and returns in first quality is our specialty.



Nos. 10, 11, 12, 13 — BULL NOSES. See No. 74.
Nos. 14, 15, 16, 17 — STARTERS OR STOPS.
No. 18 — BINDER HEADER.
No. 19 — BINDER STRETCHER.

STARTERS OR STOPS, Nos. 14, 15, 16, 17, can be used to form the corner between bull nose jamb and bull nose sill of window or other like construction, also No. 20 or No. 21 on Sheet No. 20. They can also be used to convert a corner or jamb from quoin to bull nose, or vice versa.



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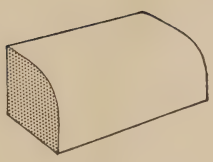

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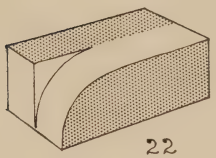

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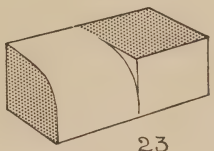

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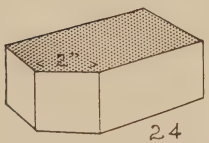

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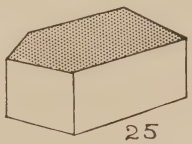

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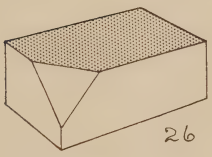

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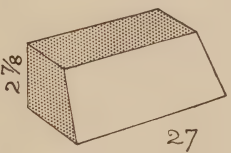

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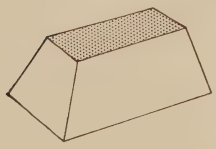

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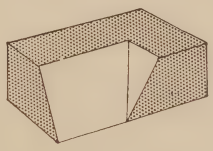

29

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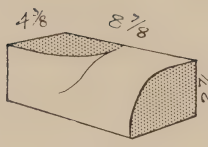
No.	Name.	Companion Brick.
20	Flat Bull Nose Header.	75
21	Flat Bull Nose Stretcher.	72
22, 23	Square Stop or Starters for each.	22 for 20 23 for 21
24	Splay brick for chamfered corners.	
25	Octagon Brick.	
26	Starter for No. 24.	24
27	Plinth.	28, 29
28	Return for Plinth.	27
29	Mitre for Plinth.	27



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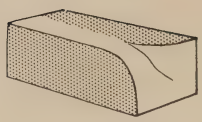

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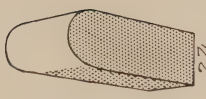

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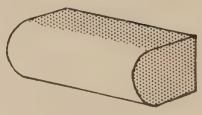

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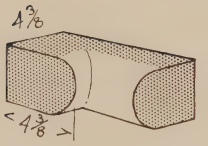

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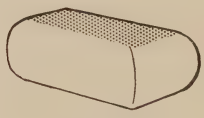

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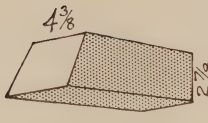

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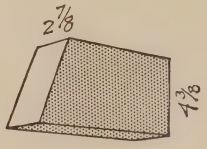

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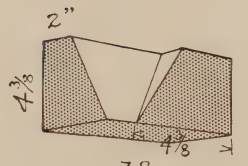

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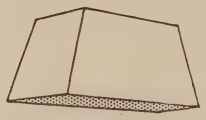

39

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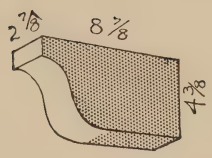
No.	Name.	Companion Brick.
30	Bull Nose Riser Mitre.	21
31	" " " "	20
32	Half Round Bead Header or Nosing.	
33	" " " Stretcher "	
34	Mitre for 32 and 33.	32 and 33
35	Return for 32 and 33.	
36	Header on end-flat Plinth	
37	Header on edge Plinth.	
38	Mitre for No. 37.	37
39	Return for No. 37.	37



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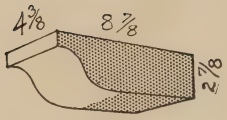

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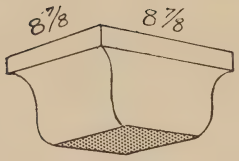

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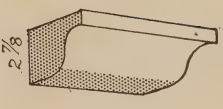

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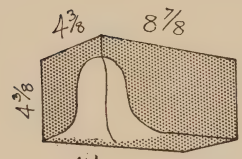

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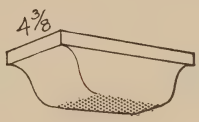

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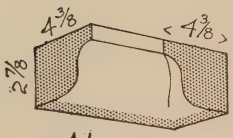

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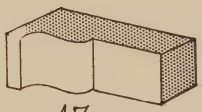

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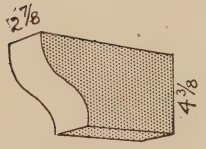

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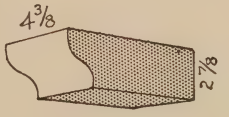
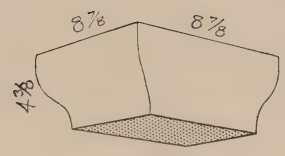


49

No.	Name.	Companion Brick.
40	Cyma Header Edge.	42, 44
41	" " End.	43
42	Return for Cyma Edge.	40
43	Cyma Stretcher.	41
44	Mitre for Cyma Edge.	40
45	Return for Cyma Stretcher.	41, 43
46	Mitre for " "	41, 43
47	Panel Brick for Cyma shape.	
48	Ogee Header Edge.	See Page 5-50
49	" " End (flat).	See Page 5-51



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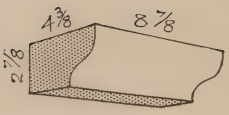

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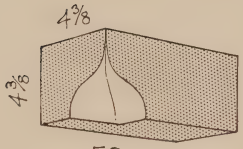

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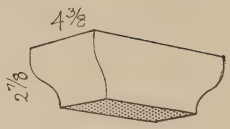

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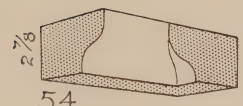

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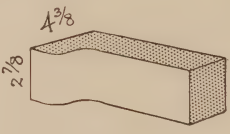

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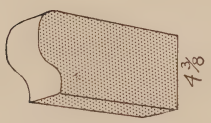

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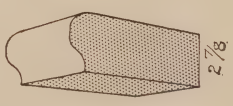

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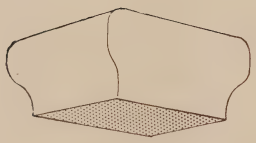

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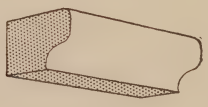
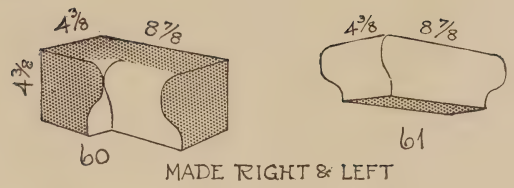
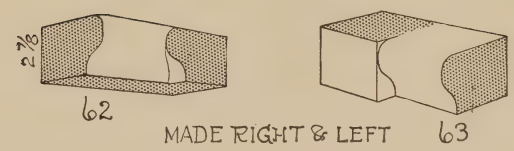
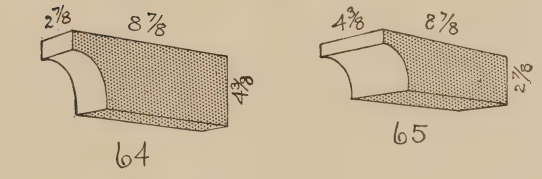


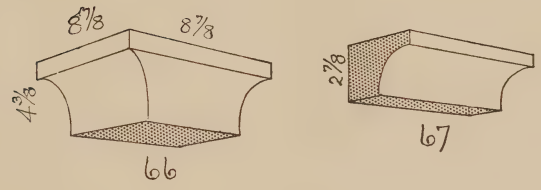
59

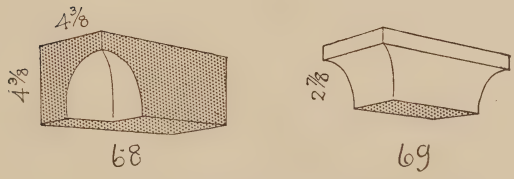
No.	Name.	Companion Brick.
50	Return for Ogee Header Edge.	48
51	Ogee Stretcher.	49, 53
52	Mitre for Ogee Header Edge.	48
53	Return for Ogee Header Flat.	49, 51
54	Mitre for Ogee Header and Stretcher Edge.	49, 51
55	Panel Brick for Ogee Shape.	
56	Cap Course Header Edge.	60
57	" " " (flat)	61
58	Return for Header Edge.	
59	Cap Course Stretcher.	61



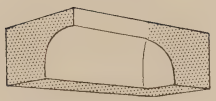








No.	Name.	Companion Brick.
60	Mitre for Header Edge.	56
61	Return for Cap Course Stretcher.	57, 59
62	Mitre for Cap Course Stretcher.	57, 59
63	Stop and Starter for Cap Course.	57, 59
64	Cove Header Edge.	
65	Cove Header End (flat).	
66	Return for Cove Header Edge.	64
67	Cove Stretcher.	
68	Mitre for Cove Header Edge.	64
69	Return for Cove Stretcher.	65, 67



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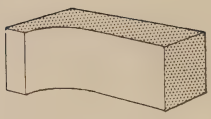

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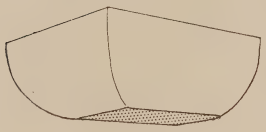

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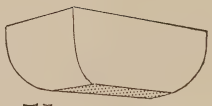

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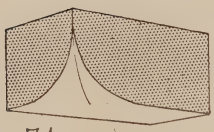

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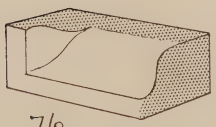

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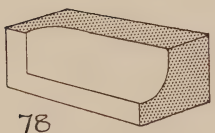

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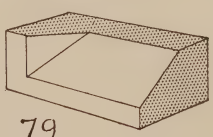
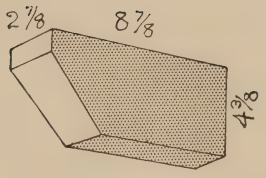


79

No.	Name.	Companion Brick.
70	Mitre for Cove.	65, 67
71	Cove Panel Brick.	70
72	Return ¼ Round.	10 on edge
73	Return.	20 or 21 on flat
74	Mitre for 10 set on edge, made for	10, also 11, 12, 13
75	Mitre for 20.	20, 21
76	Panel Mitre for 47.	47
77	Panel Mitre for 55.	55
78	Panel Mitre for 71.	71
79	Panel Mitre for Plinth 87.	87



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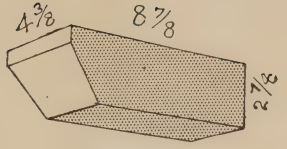

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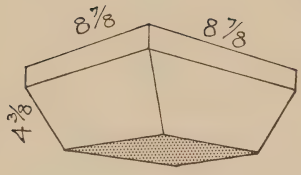

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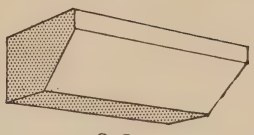

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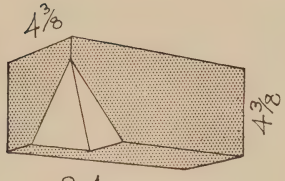

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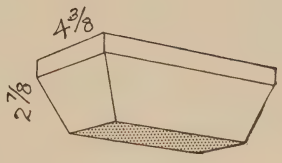

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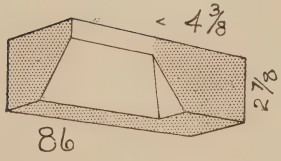

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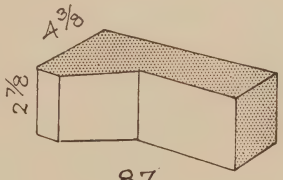
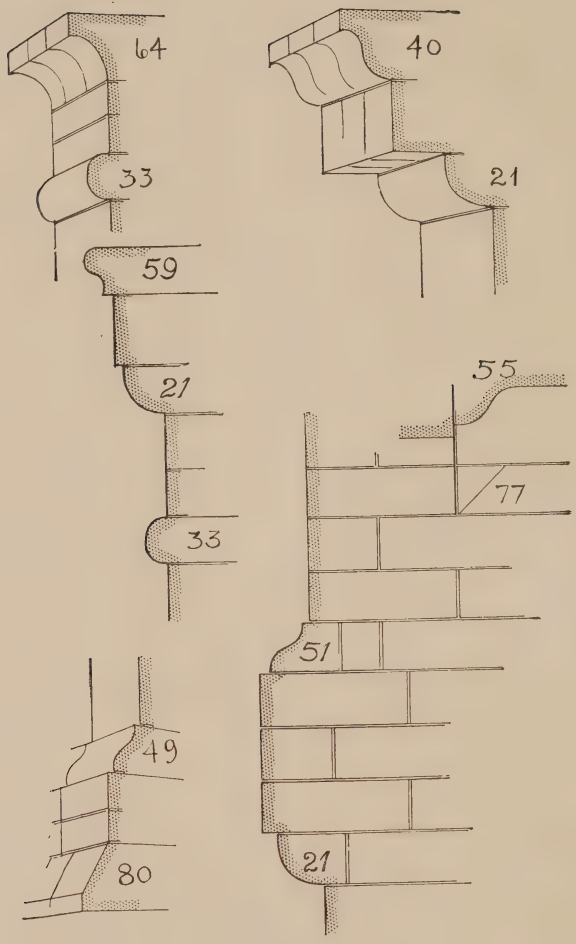


87

SQUARE CAP MOULDING.

No.	Name.	Companion Brick.
80	Header Edge.	82, 84
81	Header End (flat).	83
82	Return for Header Edge.	80
83	Square Cap Moulding Stretcher.	81
84	Mitre for Header Edge.	80
85	Return for Cap Stretcher.	81, 83
86	Mitre for Cap Stretcher.	81, 83
87	Square Panel Brick.	



A FEW EXAMPLES OF MOULDINGS IN ENAMELED BRICKS

STANDARD SIZES ENAMELED BRICK

English Size Enameled Brick—2⅞″x8⅞″x4⅜″
American Size " " —2¼″x8¼″x4″
Roman Size " " —1½″x11¾″x4″
Norman Size " " —2¼″x11¾″x4″

Made in any of our colors or shapes. Standard colors and shapes held in stock in small quantity only.

DETAILS REQUIRED FOR ARCH BRICK

When ordering arches please consult the following pages and give all necessary information as to details. Furnish details as long as possible in advance of time the arches will be required. We should be allowed from three to six weeks' time to make up Arch Brick. Arch Brick should be made to order to secure satisfactory work. We keep no standard arches in stock.

YOU SEND SCALE BLUE PRINTS—

WE DO THE REST, VIZ.

We make full-size working drawings.

We mark drawing so that each different brick has its own designating letter or number in arch, and make schedule.

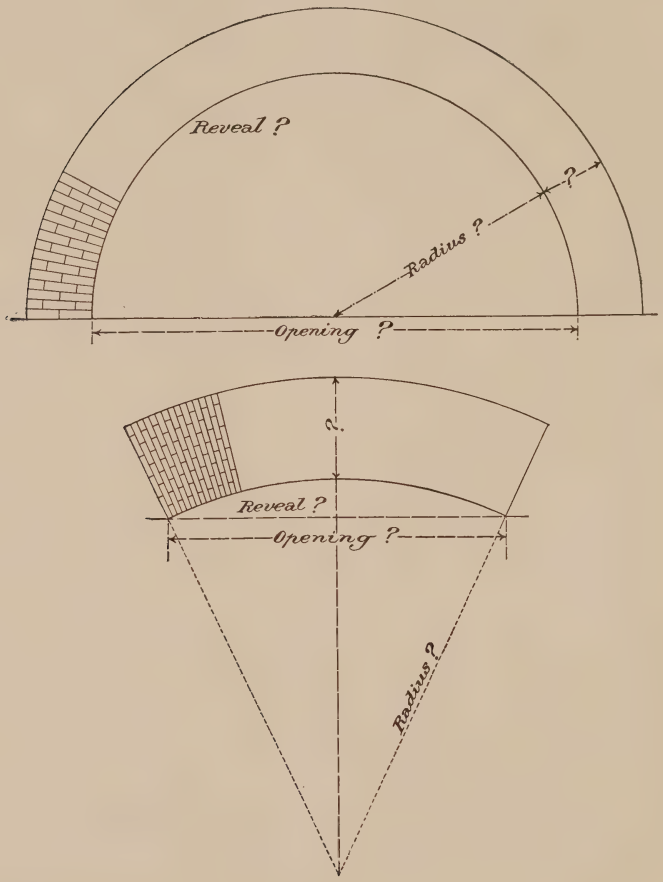
We make every brick as per drawing, each brick marked with designating letter or number as per schedule.

We ship you copy of drawing and schedule with the brick to serve as guide in setting.

We pack arches separately in barrels, and mark barrels distinctly to avoid confusion at job.

What Can Be Simpler for You!!

SEMI-CIRCULAR AND SEGMENT ARCHES



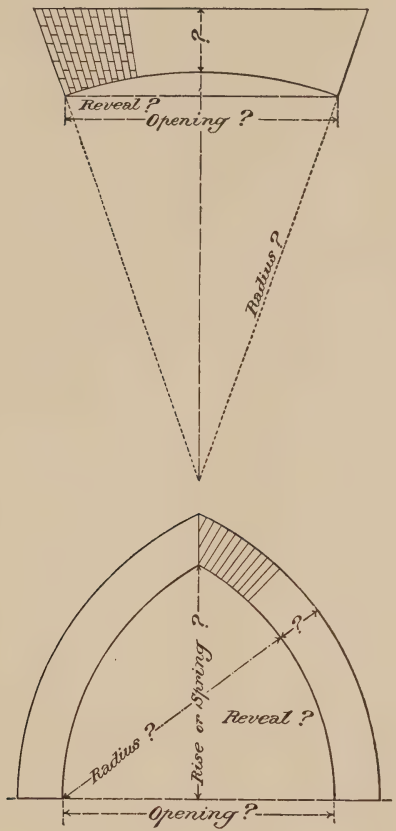
WE CAN MAKE THESE WITH MOULDED REVEALS

Give the Following Details:

Width of opening. Radius. Depth of reveal or soffit. Height of face; give inches if laid with cut stone in skew-back; give number of courses if laid with bricks in skew-back. If on piers, give width of pier.

SEGMENT AND GOTHIC ARCHES

(SEGMENT ARCHES WITH FLAT TOPS)



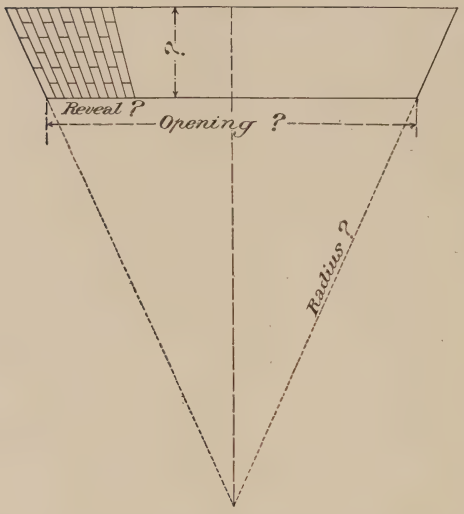
WE CAN MAKE THESE WITH MOULDED REVEALS

Gothic arches will be made to one radius, as above, unless otherwise specified

Give the Following Details:

Width of opening. Radius. Depth of reveal. Height of face; give inches if laid with cut stone in skew-back; give number of courses if laid with bricks in skew-back. If on piers, give width of pier. If Segment arch, give rise or spring of arch.

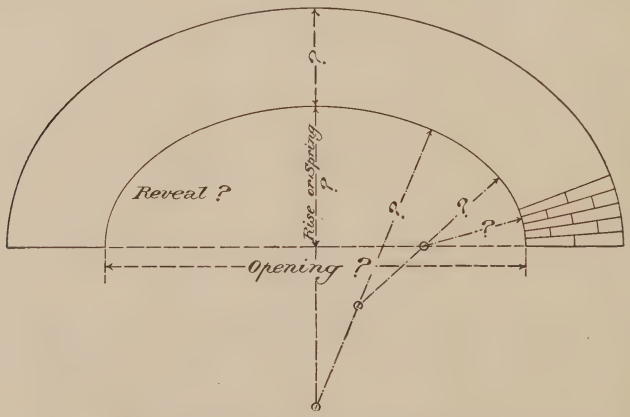
FLAT AND ELLIPTIC OR THREE-CENTERED ARCHES



Give the Following Details:

Width of opening. Radius. Depth of reveal. Height of face; give inches if laid with cut stone in skew-back; give number of courses if laid with bricks in skew-back. If on piers, give width of pier.

FLAT ARCHES CANNOT BE MADE WITH MOULDED REVEALS



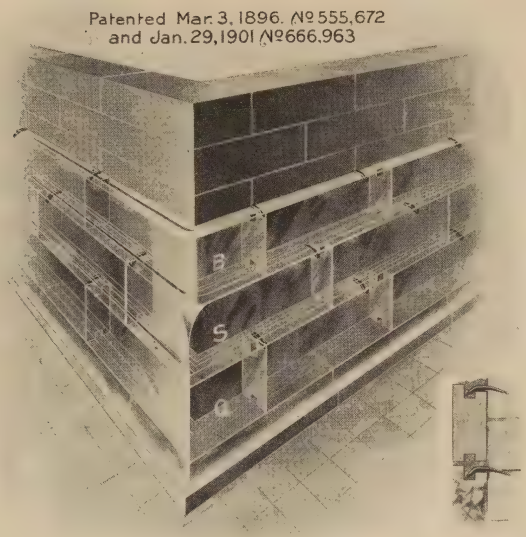
WE CAN MAKE THESE WITH MOULDED REVEALS

Give the Following Details:

Width of opening. Each of the three radii. Rise or spring of arch. Depth of reveal. Height of face. If on piers, give width of pier.

INTERLOCKING TILE

A SPACE ECONOMIZING ENAMELED BRICK



Q—Patent L Shaped Quoin.

S—Patent L Shaped Starter for Base or Quoin.

B—Patent L Shaped Bullnose.

GENERAL DESCRIPTION AND INSTRUCTIONS FOR LAYING THEM

The bricks or tiles are grooved all along the top and bottom edges; the walls of the lower groove being of even length, while the inner wall of the upper groove is lower than the outer one; this allows the outer joints to be laid close and at the same time leaves space enough between the inner walls for a nail which may be driven at any point within the length of the tile *where the same crosses a horizontal or vertical* joint of the wall behind.

In bedding the tile, the cement seizes the nail and fills the groove, bonding all together and to the wall. Should the nail not drive as intended, it can readily be bent in the direction of the groove, and thus tend to hold it even more firmly.

After setting the lower course of tile or base course moulding, drive nails at the chosen distances apart over the top of a wooden template of equal width to that of one course of tiles, English or American size, as used. Distance of nails from 9″ to 18″ or even 24″ apart may be indicated on template, so that a boy or helper may drive them with aid of template in advance of setter or mason, who before laying tiles drives each nail with his trowel into or along the groove below just before throwing in cement and setting the next tile.

The tiles are made to lay as standard sized brick, both English and American face, and being but 1½ inches thick save nearly 3 inches of needless brick work wherever it is not necessary that brick of 4⅜ inches thickness be used to carry a load and form part of wall bond.

No. 12 wire nails, 1½ inches long, are recommended for use on brick work backing. Screws or shorter nails can be used where tiles are set as lining over wooden partitions, to give the effect of an enameled brick wall, thus economizing materially in space, as is often desirable in halls and vestibules, the gain being three inches on each side of room wherever thus used. Owing to the secure bond between the tiles effected by the cement tongue in the middle groove, it is not necessary to nail each individual tile.

Patent L shaped bullnose and quoins are supplied for corners, completely imitating regular brick, as shown in cut, thus bonding one with the other to an intimate whole, and making displacement impossible except by fracturing the tiles. Special mouldings for top of wainscoting fastened in a similar manner, are also furnished.

UNITED STATES PATENT OFFICE.

JOHN V. V. BOORAEM, OF BROOKLYN, NEW YORK.

TILE FOR WALLS.

SPECIFICATION forming part of Letters Patent No. 555,672, dated March 3, 1896.
Application filed September 28, 1895. Serial No. 563,967. (No model.)

To all whom it may concern:

Be it known that I, JOHN V. V. BOORAEM, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Tiles for Walls and other Parts of Buildings, of which the following is a specification.

This invention relates to tiles which may be used for walls, floors or ceilings, but which are especially designed for the facing of walls.

The object of the invention is to obtain tiles for these purposes which may be easily moulded, which are free from holes, notches and sharp edges, and therefore little, if at all liable to be broken in handling or in transportation or by the act of nailing or securing them in place.

To enable others skilled in the art to construct and apply tiles according to my invention, I will proceed to describe the improvement with reference to the accompanying drawings and afterward point out its novelty in claims.

Figure 1 in the drawings represents a face view of the tiled surface of a wall, the front or outer portion of some of the tiles being broken away to expose their interiors to view. Fig. 2 represents a transverse vertical section of the tiling and its backing. Fig. 3 represents a transverse section of a single tile corresponding with Fig. 2; Fig. 4, a transverse section of two tiles, illustrating a slight modification.

Similar letters of reference designate corresponding parts in all the figures.

A A designate the tiles, the vertical sides or ends *a a* of which may be and are represented as simply squared to abut together, and in the upper and lower edges of which are longitudinal grooves *b b'* preferably arranged at about the middle of the thickness of the tile and of rectangular transverse section. One of the said grooves, preferably, as represented, the lower one, *b*, has its outer wall of a depth considerably greater than that of its inner wall; but the other groove, *b'*, the upper one in the examples represented, may have the two walls of its groove of equal depth, but in any case has the outer wall of a depth not greater than the inner wall.

The upper and lower edges of the tiles outside of the grooves *b b'* are square with the face of the tile, so that the tiles of the super-imposed courses come together outside of their grooves with butt-joints, as shown at *a'* in Figs. 2 and 4.

The formation of the grooved upper and lower edges of the tiles as above described produces between the butt-jointed tiles in two successive courses a cavity *b b'*, which extends the whole length of the courses and which is closed at the outer faces of the tiles, but from which there is a contracted opening *c* all along the tiles to the inner faces thereof, the said opening *c* serving for the reception or passage of nails *e* by which to secure the tiles to the backing or wall B, to which the tiles are affixed, and permitting the nails to be inserted at any point in the length of the tiles wherever the nature of the wall or backing may render it desirable to place them, and the cavity *b b'* serving as a keyway for the reception of a key D of cement, which serves to lock the tiles of two courses together and also serves to hold the nails.

It may be here stated that the only difference between the example of tiles shown in Figs. 2 and 3 and that shown in Fig. 4 is that in the former the cavity *b b'* and opening *c* formed between the two rows of tiles are T-shaped and in the latter are rounded internally. In both cases the cavity has a contracted opening to the inner face of the tiles. It is obvious that the shape of the grooves *b b'* and the cavity which they form may be varied without materially affecting the character of the invention.

In applying these tiles to an upright wall or backing, they are built upon each other from the bottom or lower part of the wall or backing upward, and as each course is laid the several tiles in the course are nailed to the wall or backing by one or more headed nails *e* of any suitable kind driven into the latter at any suitable point or points in the length of each tile, the heads of the nails overlapping the interior of the inner wall of the groove. This driving is permitted without injury to the facing of the tile by reason of the depth of the outer wall of the upper groove *b'* being no deeper than that of the inner wall. Before laying the next course the grooves *b'* in the upper edges of the tiles are filled with cement, which is piled up sufficiently above said groove to fill the groove *b* in the lower edge of the next course above, and also fill the recess or contracted opening *c* when the next course is applied. This cement, when set, not only forms a key in the keyway constituted by the said grooves and recess and locks the tiles of the two courses together, but moreover, by filling up the recess or opening *c*, it assists in holding the tiles to the wall or backing. The deeper outer walls of the grooves *b* in the tiles of each course rest upon the outer walls of the grooves *b'* in the tiles of the course below in such manner as to make a perfectly close butt-joint between the two courses of tiles.

In applying tiles to a floor or ceiling substantially the same method above described is practiced, the succeeding courses being laid with their grooves *b b'* outward instead of upward.

An important feature of this invention is that it provides for dispensing with beveled or sharp-edged matching surfaces and with nail-holes, which are sources of very much breakage and consequent loss in the handling and securing of tiles in general, permitting as it does the use of tiles with none but butt-joints between the several courses and yet affording provision for firmly securing them in place on walls.

(No Model.)

J. V. V. BOORAEM.

TILE FOR WALLS.

No. 555,672. Patented Mar. 3, 1896.

Fig. 1.

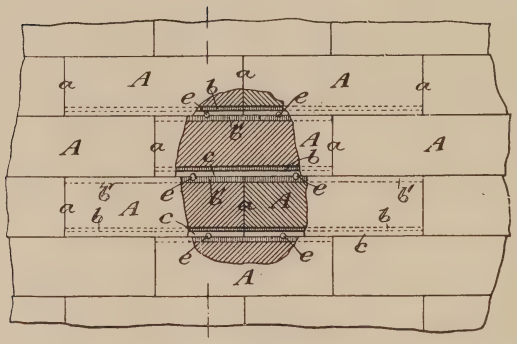


Fig. 2.

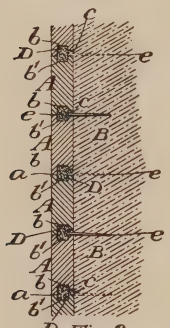


Fig. 4.

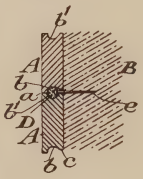


Fig. 3.

Witnesses:-
George Barry Jr.
C. C. Combs

Inventor.-
John V. V. Booraem
by attorneys
Brown & Seward

What I claim as my invention is—

1. A tile for building and other purposes having a longitudinal groove in each of two opposite edges the groove in one edge having its outer wall of a depth not greater than its inner wall and the groove in the opposite edge having its outer wall of greater depth than its inner wall and the outer edges of the outer walls of the grooves being square with the face of the tile for the purpose of forming a butt-joint, substantially as and for the purpose herein described.

2. A tile for building and other purposes having in its upper edge a longitudinal groove the outer wall of which is of a depth not greater than its inner wall and having in its lower edge a groove the outer wall of which is of greater depth than its inner wall and the upper and lower edges respectively of the outer walls of said grooves being square with the face of the tile for the purpose of forming butt-joints, substantially as and for the purpose herein described.

3. The combination of two contiguous tiles having their adjacent edges squared contiguously to their outer faces to form butt-joints and having formed partly in each of said edges a cavity which is closed at the outer faces but has a contracted opening to the inner faces of the tiles, said cavity serving for the reception of cement by which the two tiles are locked together, substantially as herein described.

JOHN V. V. BOORAEM.

Witnesses:
FREDK. HAYNES,
GEORGE BARRY, JR.

UNITED STATES PATENT OFFICE.

BERNARD JACQUART, OF SOUTH RIVER, NEW JERSEY.

BRICK OR TILE COVERING FOR BEAMS.

SPECIFICATIONS forming part of Letters Patent No. 674,089, dated May 14, 1901.

Application filed Feb. 26th, 1901. Serial No. 48,937. (No Model.)

My invention relates to an improvement in brick or tile coverings for beams, with the object in view of providing a structure which will entirely cover the exposed portions of the beam, preferably provided with an enameled face.

A further object is to provide a structure composed of an intermediate series of bricks or tiles located along one surface of the beam, which bricks or tiles are securely locked in position by two series of bricks or tiles which form the adjacent bases of the arches which span the spaces between the said beam and the next succeeding beams on either side.

A further object is to provide an enameled brick or tile covering for beams in which the base or locking bricks or tiles of the arches are not exposed, a single joint being formed at the meeting corners of the intermediate brick or tile, the locking bricks or tiles and the adjacent arch bricks or tiles, the enameled face of the intermediate brick or tile forming a continuation of the enameled faces of the said adjacent arch bricks or tiles.

A practical embodiment of my invention is represented in the accompanying drawings, in which

Figure 1 represents, in vertical cross section, a portion of a ceiling with my improved beam covering applied to a metallic I-beam.

Figure 2 is an inverted plan view of the same.

Figure 3 is a section taken in the plane of the line A-A of Figure 1.

Figure 4 is a view in perspective of one of the locking bricks or tiles, and

Figure 5 is a view in perspective of one of the intermediate bricks or tiles.

The metallic I-beam represented in the accompanying drawings, is denoted by *a* and the bricks or tiles which form the arches, by *b*.

The bricks or tiles which are in engagement with the I-beam and which form the bases of the arches are denoted by *c*. The intermediate bricks or tiles which are locked in position along one face of the beam *a* by the bricks or tiles *c*, are denoted by *d*. The reveals or exposed surfaces of the arch bricks or tiles *b* and the exposed surface of the intermediate bricks or tiles *d* are provided with an enameled facing or surface *e*.

As all of the locking bricks or tiles *c* which form the bases of the arches which span the spaces between the different beams, are quite similar in form, I will proceed to describe one only of the said bricks or tiles.

The brick or tile *c* is provided with a slanting outer side *f* against which the next adjacent brick or tile of the arch abuts. The inner side *g* of the brick or tile is arranged to abut against the web of the I-beam.

The front of the brick or tile is provided with a locking tongue *h* running lengthwise thereof, formed by providing a V-shaped groove *i* in the outer front corner of the brick or tile and cutting away the inner front corner of the brick or tile, as shown at *j*, preferably forming an inclined surface arranged to correspond with the inner surface of one flange of the base of the I-beam *a*.

No. 674,089. Patented May 14, 1901.

BERNARD JACQUART.

Brick or Tile Covering for Beams.

(Application filed Feb. 26, 1901.)

(No Model.)

Fig. 1.

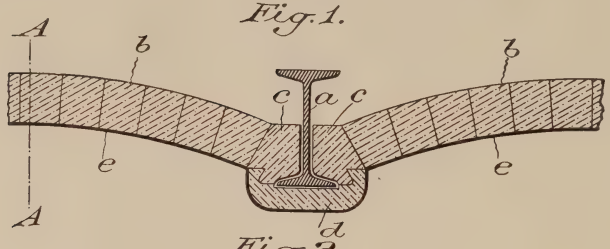


Fig. 2.

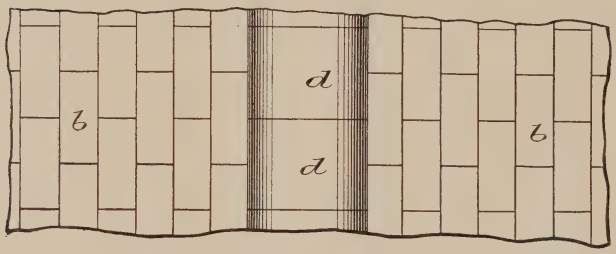


Fig. 3.

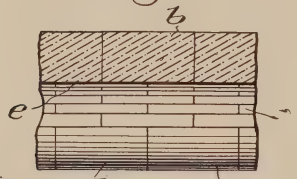


Fig. 4.

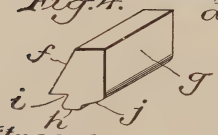
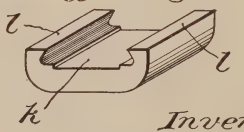


Fig. 5.



Witnesses:-
George Barry Jr.
Henry Thieme

Inventor:-
Bernard Jacquart
by his attorneys
Brown & Howard

The intermediate brick or tile has an interlocking connection with the two locking bricks or tiles in the present instance by providing the inner face of the intermediate brick or tile with a wide dove-tailed groove *k* extended lengthwise therethrough, the groove being of sufficient width to receive therein the base of the beam and the outwardly extended tongues *h* of the two adjacent locking bricks or tiles *c*.

The inner face of the brick or tile *d* upon opposite sides of the groove is so arranged that it will snugly fit the angles formed in the outer front corners of the two locking bricks or tiles *c*, a single joint being formed upon each side of the beam between the meeting corners of adjacent arch brick or tile, the locking brick or tile and the intermediate brick or tile, thus entirely concealing the locking brick or tile *c*. The bottom of the dove-tailed grove *k* in the intermediate brick or tile is preferably made to snugly fit the outer ends of the tongues *h* of the two locking bricks or tiles *c* and the outer face of the base of the I-beam *a*.

By providing the beam with the covering hereinbefore set forth, it will be seen that I am enabled to entirely do away with the necessity of providing the locking bricks or tiles *c* with an enameled face, thus materially reducing the expense of producing the covering.

The bricks or tiles *c* may be dried and burnt within the kiln without requiring the special care and space that is necessary when the enameled facing is applied thereto.

Furthermore, a fewer number of exposed joints is obtained, the only exposed joint in the covering being the one at the angle formed between the intermediate brick or tile and the arch brick or tile *b* at each side of the beam.

It is evident that slight changes might be resorted to in the form, construction and arrangement of the several parts without departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the the structure herein set forth, but what I claim is:

1. A beam covering comprising an intermediate brick or tile and a pair of locking bricks or tiles having an interlocking connection with the back of the intermediate brick or tile for holding it in position, substantially as set forth.

2. A beam covering comprising an intermediate brick or tile, arch bricks or tiles and locking bricks or tiles having an interlocking engagement with the intermediate brick or tile and being concealed by the intermediate brick or tile and the adjacent arch bricks or tiles, substantially as set forth.

3. A beam covering comprising an intermediate brick or tile located along the outer face of the beam and a pair of locking bricks or tiles upon opposite sides of the beam having tongue and groove connections with the intermediate brick or tile for locking the intermediate brick or tile in position, substantially as set forth.

4. A beam covering comprising an intermediate brick or tile located along one face of the beam and having a dove-tailed groove therein and a pair of locking bricks or tiles upon opposite sides of the beam having tongues thereon engaging said groove for locking the intermediate brick or tile in position, substantially as set forth.

5. In combination, an intermediate brick or tile having a dove-tailed groove there in, a beam having a flanged base located in the said groove and a pair of locking bricks or tiles upon opposite sides of the beam having portions thereof interposed between the base of the beam and the sides of the groove in the intermediate brick or tile for locking the intermediate brick or tile in position, substantially as set forth.

6. An enameled covering for beams comprising an enameled intermediate brick or tile, enameled arch bricks or tiles and intermediate non-enameled locking bricks or tiles upon opposite sides of the beam, the said non-enameled bricks or tiles being concealed by the intermediate enameled brick or tile and the adjacent enameled arch bricks or tiles, substantially as set forth.

7. A locking brick or tile having an outwardly extended tongue formed along its outer face by providing a V-shaped groove in its outer front edge and cutting away a portion of its inner front edge, substantially as set forth.

UNITED STATES PATENT OFFICE.

BERNARD JACQUART, OF SOUTH RIVER, NEW JERSEY, AND JOHN FRANCIS BOORAEM, OF NEW YORK, N. Y.

METHOD OF MANUFACTURING TILES.

SPECIFICATION forming part of Letters Patent No. 666,963, dated January 29, 1901.
Application filed October 4, 1900. Serial No. 31,944. (No specimens.)

To all whom it may concern:

Be it known that we, BERNARD JACQUART, a resident of South River, in the county of Middlesex and State of New Jersey, and JOHN FRANCIS BOORAEM, a resident of the borough of Manhattan, in the city and State of New York, citizens of the United States, have invented a new and useful Improvement in Methods of Manufacturing Tiles, of which the following is a specification.

Our invention relates to an improvement in the method of manufacturing tiles, and relates more particularly to the method of manufacturing thin enameled tiles in the wet process, whereby a thin tile may be successfully manufactured which will be perfectly straight when completed.

In the accompanying drawings, Figure 1 represents a face view of a brick-blank from which a bull-nose return-tile is formed. Fig. 2 is an end view of the same. Fig. 3 is a top plan view. Fig. 4 is a top plan view of the blank after the tile portion has been partially severed from the refuse portion of the blank. Fig. 5 is a section taken in the plane of the line 5 5 of Fig. 4. Fig. 6 is a section taken in the plane of the line 6 6 of Fig. 4. Fig. 7 is a top plan view of the refuse portion of the brick-blank after it has been severed from the tile. Fig. 8 is a top plan view of the tile. Fig. 9 is a view in isometric perspective of the tile. Fig. 10 is a view in isometric perspective of a full return-tile without the bull-nose. Fig. 11 is a view in edge elevation of a brick-blank from which a straight enameled tile is formed. Fig. 12 is an end view of the same. Fig. 13 is a top plan view. Fig. 14 is a top plan view of the blank after the tile portion has been partially severed from the refuse portion of the blank. Fig. 15 is a transverse section taken in the plane of the line 15 15 of Fig. 14. Fig. 16 is a top plan view of the refuse portion of the blank after it has been severed from the title. Fig. 17 is a top plan view of the straight tile, and Fig. 18 is an isometric perspective view of the same.

In manufacturing thin tiles in the wet process there has been great difficulty in keeping the tiles straight and avoiding warping the same while being burned in the kiln. To obviate this tendency to warp, it has been necessary to make the thin tile very much thicker than the requirements of the tile demanded, the tile being used only as a facing for walls, and the thinner the facing the less space the tiles would take up in the room.

By means of the process to be hereinafter described, we are enabled to make a very thin tile which is held perfectly straight while being burned, the refuse portion being very readily removed from the tile after it has been completed, which refuse portion may be again utilized in the manufacture of the brick-blank, and because of its having once been burned it serves to lessen the shrinkage of the new blanks thus formed from the material.

We will proceed to describe our improved method of making tiles.

A blank is formed of the full size of a brick by the wet process commonly used. While the brick-blank is in its wet state, the portion of the same which is to form the tile is nearly severed therefrom. When it is intended to manufacture a straight tile, the tile portion a of the blank A is nearly severed from the refuse portion a' by forming in the opposite faces of the blank two deep inwardly extended kerfs a^2 a^3, extending the entire length of the blank and leaving a long, narrow web of solid material connecting the refuse portion with the tile portion. When a return tile is to be formed, the kerfs a^2 a^3 extend from one end of the blank to a point a short distance from the other end of the blank between the tile portion a and the refuse portion a' of the blank A, where they meet a kerf a^4, which completely severs the return portion a^5 of the tile from the refuse portion a' of the blank. These kerfs may be formed in any desired manner and at the required distances from the faces of the tiles. The faces of the tile portion of the brick may be treated to an enamel coating either before or after the kerfs are formed, as may be found convenient. The blank is then completely dried and burned in a kiln in the usual manner. Because of the connection between the refuse portion and the tile portion the tile portion is prevented from warping. After the brick-blank has been completely dried and burned the refuse portion a' may be readily broken away from the tile portion a.

This process enables us to form a full return tile, which has hitherto been impossible in a thin tile. The process also enable us to save a large amount of material in each tile, serving the double purpose of enabling us to construct a very thin facing-wall and also saving the cost of the additional material which it has heretofore been necessary to utilize in the drying process.

What we claim is—

1. The method of manufacturing return-tiles consisting in forming a brick-blank, then nearly severing the tile portion in one direction and wholly severing it in the opposite direction from the refuse portion of the blank, while in its wet state, then drying and burning the blank and finally separating the tile from the refuse portion of the blank, substantially as set forth.

2. The method of manufacturing a thin enameled tile consisting in forming a brick-blank, nearly severing the tile portion from the refuse portion of the blank by forming deep kerfs in its opposite faces while in its wet state, drying and burning the blank, coating the face of the tile portion of the blank with an enamel intermediate the formation of the blank and the drying and burning of the same and finally separating the tile portion from the refuse portion of the blank, substantially as set forth.

In testimony that we claim the foregoing as our invention, we have signed our names, in the presence of two witnesses, this 21st day of September, 1900.

BERNARD JACQUART.
JOHN FRANCIS BOORAEM.

Witnesses:
JAMES S. WRIGHT.
ANNIE B. WALTERS.

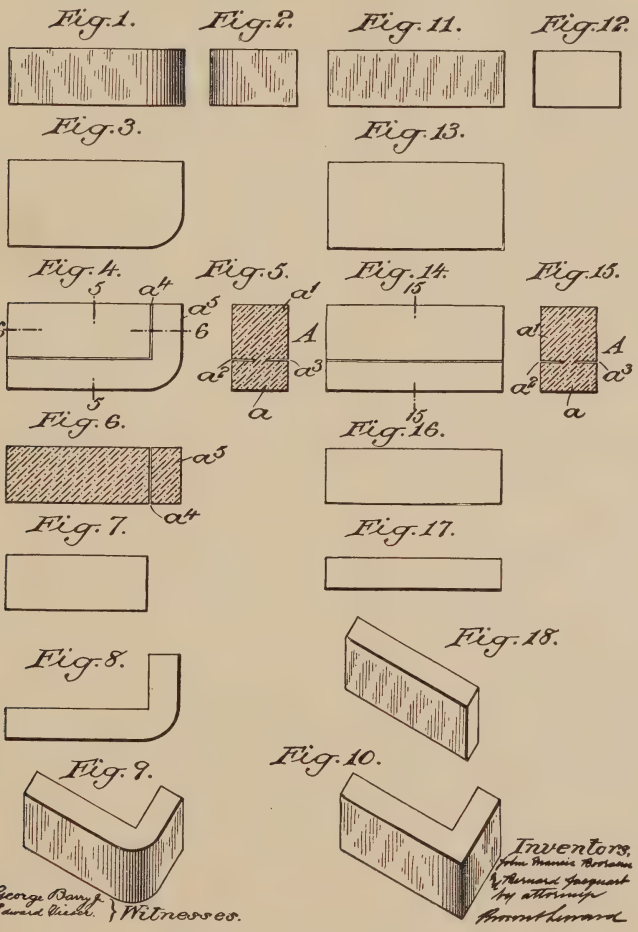
No. 666,963. Patented Jan. 29, 1901.

B. JACQUART & J. F. BOORAEM.

METHOD OF MANUFACTURING TILES.

(Application filed Oct. 4, 1900.)

(No Model.)



UNITED STATES PATENT OFFICE.

JOHN FRANCIS BOORAEM, OF NEW YORK, N. Y.

BRICK.

SPECIFICATION forming part of Letters Patent No. 616,652, dated December 27, 1898.
Application filed May 18, 1898. Serial No. 681,006. (No Model.)

To all whom it may concern:

Be it known that I, JOHN FRANCIS BOORAEM, a citizen of the United States, and a resident of the borough of Brooklyn, in the city and State of New York, have invented a new and useful Improvement in Bricks, of which the following is a specification.

My invention relates to an improvement in bricks, and relates more particularly to bricks which are intended for use in building walls in subways or other places where dampness is liable to occur from soakage or from any other causes.

The object of my invention is to provide the fronts of the bricks with any suitable facing impervious to moisture and the backs of the bricks with coinciding channels for carrying off the moisture which is held back by the said impervious facing and for preventing the moisture from collecting and backing up, and thus defacing the face of the wall by stalactitic growth and drip at joints.

A further object is to provide the bricks in the lower row of the wall or in any intermediate row with a horizontal channel, which communicates with the vertical channels for conveying the moisture to any suitable outlet.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Fig. 1 represents a transverse horizontal section through a portion of a wall and its backing—such, for instance, as that used in the construction of a subway. Fig. 2 is a front view of the same. Fig. 3 is a perspective view looking at the back of a portion of a wall formed of my improved bricks, showing clearly the arrangement and location of the vertical channels and a single horizontal channel in the bottom row of bricks communicating with the vertical channels. Fig. 4 is a perspective view looking toward the back of a brick having the vertical channels only, and Fig. 5 is a similar view of a brick having both the vertical channels and the horizontal channel.

A designates a series of I-beams between which the backing B, of concrete or other suitable material, is located.

C designates one of my improved bricks, which bricks are here arranged in bonded order to form a wall in front of the backing. The front of the brick C is covered with any suitable facing c, impervious to moisture, which facing is preferably an enameled surface. The facing c serves to hold back any moisture which would accumulate and otherwise penetrate through onto the face of the brick.

The back c' of the brick has one or more vertical grooves therein. In the present instance I have shown a pair of vertical grooves c^2 c^3, one near each end of the brick. These grooves are so arranged that when the wall is constructed of the bricks arranged in bonded form the grooves in one brick will correspond with the grooves in the adjacent bricks above and below, so as to form continuous channels from the top to the bottom of the wall.

Each of the bricks located in the bottom row of the wall or in any intermediate row, where desired, has in its back a horizontal groove c^4, extending the length thereof and communicating with the vertical grooves c^2 c^3. This horizontal groove c^4 serves to carry off the moisture, which runs down the vertical grooves to suitable outlet-gutters placed at any desired point, which gutters are not shown herein.

The wall, as above described, is particularly valuable for use in connection with subways or other places where there is more or less liability of dampness collecting at back of outer wall, which would otherwise gradually soak through and discolor facing with chemical deposits or vegetable growth.

What I claim is—

1. A wall composed of bricks arranged in bonded form, having their fronts provided with a facing impervious to moisture, each of the said bricks being provided with a pair of vertical grooves in its back, one near each end, the said grooves being so arranged that the vertical groove near one end of any brick will coincide with the vertical groove near the other end of the next adjoining brick immediately above or below the said brick, whereby a continuous vertical channel is formed in the wall, substantially as set forth

2. A brick having its front covered with a facing impervious to moisture and its back provided with a horizontal groove extending the entire length of the brick and one or more vertical grooves communicating therewith, substantially as set forth.

In testimony that I claim the foregoing as my invention, I have signed my name, in presence of two witnesses, this 9th day of May, 1898.

J. FRANCIS BOORAEM.

Witnesses:
FREDK. HAYNES,
C. S. SUNDGREY.

SUBWAY DRAIN TILE.

No. 616,652. Patented Dec. 27, 1898.

J. F. BOORAEM.

BRICK.

(Application filed May 16, 1898.

(No Model.)

Fig.1.

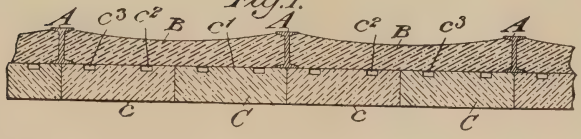


Fig.2.

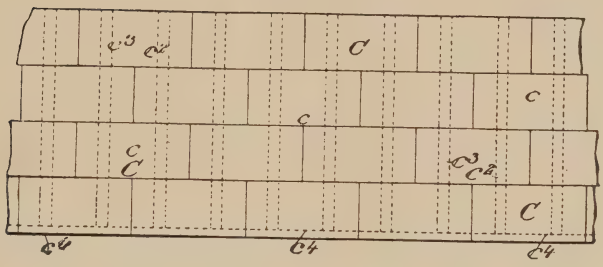


Fig.3.

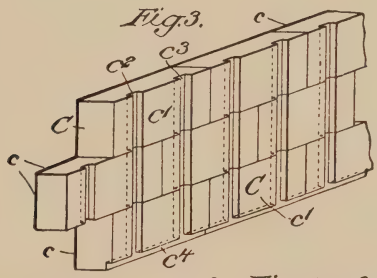


Fig.4.

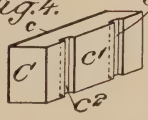
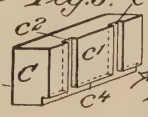


Fig.5.



Witnesses:
George Barry Jr.
Edward Wieser

Inventor:
John Francis Booraem
by attorneys
Thomas & Thomas

ENAMELED BRICK TREATMENT OF SUBWAY CONSTRUCTION

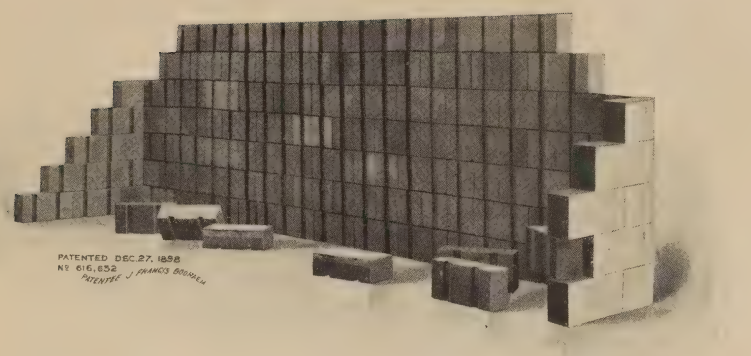
DRAINAGE OF SEEPAGE BRICK OF WALLS. PREVENTION OF DISCOLORATION OF ENAMELED FACING.

(*Extract from the Brickbuilder, December, 1900.*)

BY far the most important use in large and heavy construction work for enameled brick is in that of subway construction. The work which has been done on the Boston Subway, till now the largest American subway, makes the review of two important studies of this work a subject of interest to engineers and architects.

One of these, and the most important—although not the largest—is the treatment of the Scollay Square Station, a conspicuous feature of which is the use of white enameled brick on its north and west walls. Especially is this interesting when compared with the badly stained interior surfaces of the general subway, where the discoloring is so conspicuous as to completely obliterate in some places all the white enamel paint and other finishes applied at various points beyond the stations, and about which so much criticism is being made.

The object of the treatment of this station with a clean, bright, white, and light-reflecting enameled brick was to insure a permanent whiteness, and to prevent sweating, which the particular conditions there required. To this end it was sought, first, to drain the moisture collecting at the back of the brickwork as seepage; second, to allow a circulation of air back of brick to maintain uniform temperature on the face and back of the brick.



The drainage of the moisture which percolates through the walls of a subway is a subject to which the construction engineer has to give attention for more than one vital reason, and should be considered and treated as follows, so far as it relates to enameled brick lining. The most important fact to be realized is that this moisture, which contains various salts in solution, if allowed to soak through backing or body of the brick, would in time appear, on account of evaporation, in a solid, crusted form of stains, which would seriously mar the finished look of the work at the joints, and also appear as discoloration behind the otherwise pure white face of the enamel.

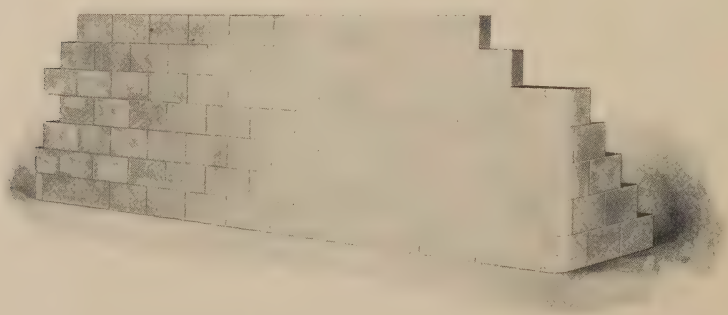
To avoid this the manufacturer, the American Enameled Brick and Tile Company, New York, by use of a design which was approved of by the engineer of the subway, and on which the company subsequently secured patents, succeeded in accomplishing the double purpose of draining this moisture away from the back of these enameled bricks so as to prevent its soaking through into the back of the enamel and destroying its whiteness as frequently happens, and further succeeded in making this part of the construction assist the other devices of the engineer to accomplish more fully the collection of moisture from the side walls of the tunnels, delivering it into the control

of the artery-like system, already designed by him throughout the tunnel. To accomplish this purpose in other parts of the subway, the constructors were obliged to design an extraordinary system of drainage.

The prevention of sweating or condensation of moisture, more or less naturally confined in the atmosphere of a subway, due to the rapid changes of temperature, or, to be more explicit, due to the fact that the air of tunnels in a falling temperature chills more rapidly than the body of the wall itself, had to be treated in a manner which would allow as free a circulation as possible with outside air, and still be consistent with the general construction design of the tunnel, and further admit of economy of space.

The same design which accomplished the *drainage of moisture* also gave free circulation of air behind the face of the enameled brick wall, and that, too, without the expense of setting hollow brick partitions behind the enameled brick, which, if used, could only have been done by narrowing the available space in the tunnel. The value of the work in fulfilling these important conditions can only be fully realized by study of the actual conditions met.

The designs and methods employed are controlled by the Company, which executed the work under United States patents, held in the writer's name, for the protection of their trade in subway work.



A FEW ILLUSTRATIONS

Of our work where photographs were obtainable, and, following these, a nearly complete list of buildings where not less than 5,000 bricks or over 500,000 were used in any one construction.

Hecht Building, opposite Southern Terminal Station, Boston.

One entrance to Hecht Building, showing American Enameled Brick and Tile Co.'s English size white brick. Second quality.

Benjamin Dean School, South Boston.

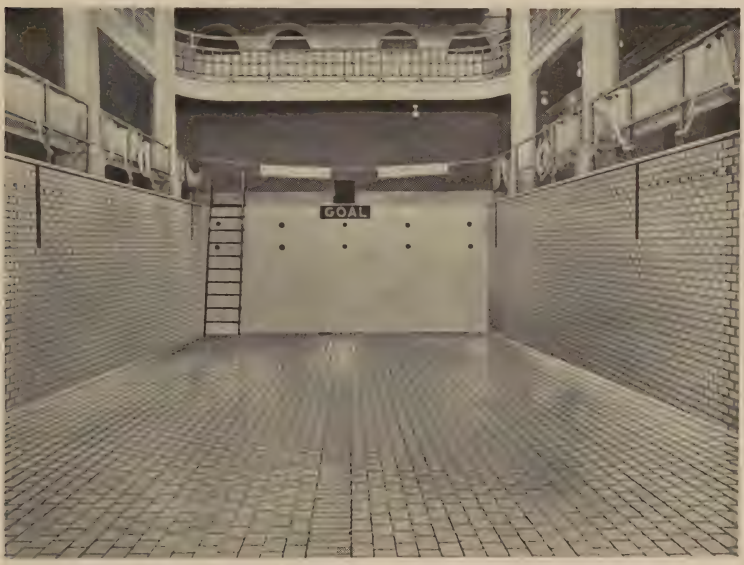
Section of stairway leading from Corridor into Basement. Walls are American Enameled Brick and Tile Co.'s American size brick.

Benjamin Dean School, South Boston.

One Section of Corridor, showing American Enameled Brick and Tile Co.'s Cream American size brick.

The Pierce Grammar School, Brookline,

Showing one corner of a sanitary toilet room lined with Enameled Brick furnished by American Enameled Brick and Tile Co.

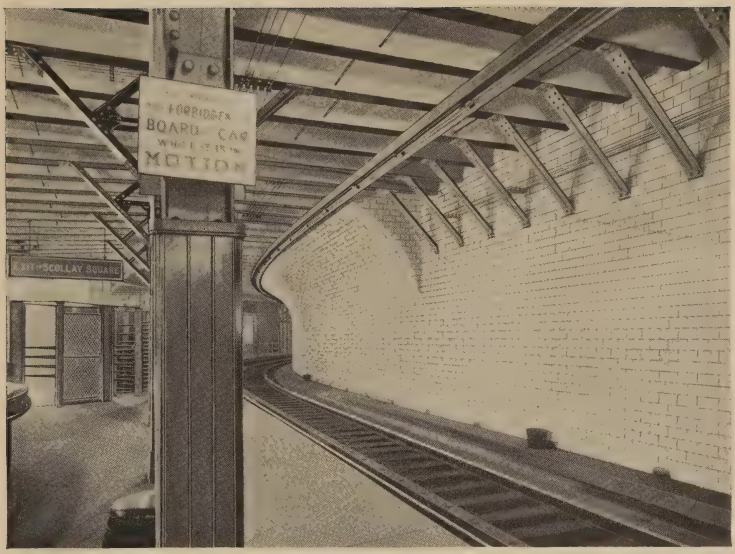


New York Athletic Club—Water Polo and Swimming Tank.

Sides of Tank, Standard English Size Brick. Bottom of Tank, English Size Brick, glazed on flat, similar to the Subway Tile, page 36. Furnished by American Enameled Brick and Tile Co.

Views of Subways

Under Southern Terminal Station, Boston, Mass., for which we supplied 498,000 Enameled Bricks. The largest single Subway Contract for Enameled Brick furnished by one manufacturer.



American Enameled Brick and Tile Co.'s

Patent drainage Subway Tile or Enameled Brick placed in Scollay Square Station of Boston Subway in the spring of 1898.

Partial List of Prominent Works Supplied With Our Enameled Brick

BOROUGH OF MANHATTAN, NEW YORK CITY

BUILDING.	ARCHITECT.	BUILDER.	QUANTITY.
Bellevue Hospital.	Withers & Dickson.	J. F. Johnson.	25,000
Cornell University Medical College, 28th st. and 1st ave.	McKim, Mead & White.	M. Reid & Co.	75,000
N. Y. Athletic Club Swimming Baths.	Wm. Cable.	Rich. Deeves & Son.	12,000
Columbia University Swimming Baths.	McKim, Mead & White.	Norcross Bros.	
Columbia University Gymnasium.	McKim, Mead & White.	Norcross Bros.	100,000
University Club.	McKim, Mead & White.	C. T. Wills.	20,000
Hotel Waldorf-Astoria.	H. J. Hardenbergh	John Downey.	11,000
Hotel Manhattan.	H. J. Hardenbergh	M. Eidlitz & Son.	3,000
M. Proctor, Private Residence, 17 E. 52nd Street.		Fountain & Choate.	40,000 1sts
Wadsworth Building.	Youngs, Bergenson & Cornell.	Robinson & Wallace.	25,000
Altman's Building, 6th ave. and 18th-19th sts.	Kimble & Thompson.	C. Sooysmith & Co M. Eidlitz & Son.	50,000
Comfort Station, City Hall Park.	Cady, Berg & See.	Thos. Dwyer.	10,000
Comfort Stations (2), Riverside Park.	Howard & Cauldwell.	John F. Johnson.	10,000
F.W.Vanderbilt's Private Stable.	H. R. Robertson.	Norcross Bros.	15,000
Senator Clark's Private House, 77th st. and 5th ave.	Lord, Hewlett & Hull.	Thos. J. Reilly.	200,000
City Wastes Disposal Co. (yearly contract).			
Waring, Chapman & Farquhar (yearly contracts).			20,000
Power House, Manhattan Elevated Road, 74th St., E. R.	W. H. Smith.	M. Reid & Co.	40,000
Roman Catholic Orphan Asylum.	Schickel & Ditmar.	Isaac A. Hopper	100,000 2ds
Bowling Green Building.	W. & G. Ausley.	Standard Structural Co.	75,000
Private Stable, 120 E. 75th st.		John J. Tucker.	13,000
Large Delicatessen Store and Restaurant.	J. P. Walthers.	Scheidecker & Gonder.	
Edison Co., Power House, 38th & 39th Sts., E. R.			50,000
German Hospital.	Schickel & Ditmar	George Vassar.	10,400 1sts

BOROUGH OF BROOKLYN

BUILDING.	ARCHITECT.	BUILDER.	QUANTITY.
Mechanics' National Bank.	Johnson & Helme.	W. & T. Lamb.	15,000
St. Catherine's Hospital.	Wm. Schickel & Co.	W. & T. Lamb.	30,000
Old People's Home.	Johnson & Helme.	W. & T. Lamb.	40,000
St. John's Home.	R. L. Daus.	Thos. G. Garlin.	80,000
Brooklyn Distilling Co.	Brooklyn Distilling Co.	Brooklyn Distilling Co.	25,000
Brooklyn Trolley Power House.			15,000
Woodlawn Cemetery.			575
New Union Cemetery.		Hoffman & Prochazka.	2,600
Nassau Trust Company.	Johnson & Helme.	W. & T. Lamb.	15,000
Power House, foot of 66th Steet.		A. Pasquini.	6,500 2ds

NEW YORK STATE—MISCELLANEOUS

BUILDING.	ARCHITECT.	BUILDER.	QUANTITY.
Public Natatorium, Albany, N.Y.	A. W. Fuller.		8,000 1sts
Roman Catholic Novitiate, Poughkeepsie, N. Y.		Jas. D. Murphy.	25,000 1sts
Private Stable, Portchester, N.Y.	Nathan C. Mellen.	Wm. Ryan.	10,000
Ophir Farm (Private Estate Hon. Whitelaw Reid), Portchester, N. Y.	McKim, Mead & White.		60,000 2ds
Middletown Homeopathic Hospital.			25,000
Binghamton State Hospital.	I. G. Perry.	Miles Leonard, Binghamton.	75,000
Schenectady Water Works, Schenectady, N. Y.			10,000
Woodside Trolley Power House, Woodside, L. I.			10,000
Private Stable, Utica, N. Y.	J. Constable, Utica.	John F. Hughes. Utica.	15,000
Sleepy Hollow Cemetery.			1,900

PHILADELPHIA, PA.

BUILDING.	ARCHITECT.	BUILDER.	QUANTITY.
Mutual Life Building.	Philip Ross, N. Y. City.	E. L. Pennock, Phila.	100,000 1sts
S. S. White Dental Building.	David Knickerbocker Boyd.	W. B. Chapman.	100,000 1sts
Real Estate and Trust Co. Building.	Edgar V. Seeler.	W. R. Chapman.	300,000 1sts
North American Office Building.		Doyle & Doak.	25,000 1sts
Belmont Pumping Station.		Turner & Kelly.	125,000 1sts

CONN., NEW JERSEY, OHIO, MARYLAND AND MISSOURI.

BUILDING.	ARCHITECT.	BUILDER.	QUANTITY.
Locomotive Co. Works, Bridgeport, Conn.		Flynt Bldg. and Construction Co.	55,000 2ds
Private Estate of Joseph Carey, Winstead, Conn.			7,600 1sts
Private Residence of J. H. Whittemore, Naugatuck, Conn.			5,000 1sts
Connecticut Mutual Life Ins. Co., Hartford, Conn.	Ernest Flagg, N. Y.	Dawson & Archer, N. Y.	125,000 1sts
N. Y., N. H. & H. R. R. Station, Hartford, Conn.			
Police Station, Hartford.	J. J. Duner		
Newark Fire Engine House, Newark, N. J.			
South Jersey Traction Co., Camden, N. J.			5,000 1sts
U. S. Government Post Office. Paterson, N. J.	U. S. Government.	McIlvaine, Unkefer & Co.	50,000 1sts
Trenton Water Works, Trenton, N. J.	W. A. Poland, Trenton.	John Barlow, Trenton.	50,000 1sts
Botany Worsted Mills, Passaic, N. J.		Flynt Bldg. and Construction Co.	120,000
Ohio State University, Columbus, O.			15,000
College of History, American University.		Jas. P. Parsons, Washington, D. C.	20,000
White Manual Training School, Washington, D. C.	Waddy B. Wood.		60,000 2ds
United Electric Railway Power House, Baltimore, Md.	Private Engineer.	John Waters.	90,000 2ds
St. Louis Transit Co., Office Bldg., St. Louis, Mo.			

BOSTON, MASS.

BUILDING.	ARCHITECT.	BUILDER.	QUANTITY.
Scollay Square Subway, Boston Transit Com'n.	Howard A. Carson (Chief Engineer).	Norcross Bros.	40,000 1sts
Boston Terminal Co.	Shepley, Rutan & Coolidge.	Norcross Bros.	500,000 1sts
American Bell Telephone Building.	Peabody & Stearns.	Woodbury & Leighton.	35,000 1sts
Benjamin Dean School.	Wm. H. Besarick.	Walter S. Sampson.	45,000 2ds
New Dorchester High School.	Hartwell, Richardson & Driver.	F. G. Coburn & Co.	13,000 1sts
Frank E. Peabody Residence.	Peabody & Stearns.	McNeil Bros.	3,500 1sts
New Bigelow School.	Chas. J. Bateman.	Conners Bros.	15,000 1sts
East Boston High School.	John Lyman Faxon.	Mead, Mason & Co.	40,000 2ds
Massachusetts Hospital.	Wheelwright & Haven.	Connery & Wentworth.	90,000 1sts
Hecht Building.	Weisbein & Jones.	W. A. & H. A. Root.	10,000 1sts 35,000 2ds
Sullivan Square Station, Boston Elevated R. R.	A. W. Longfellow, Jr.	Whidden & Co.	40,000 1sts
Dudley St. Station, Boston Elevated R. R.	A. W. Longfellow, Jr.	Whidden & Co.	12,000 1sts
First Corps of Cadets' Armory, M. V. M.	Wm. Gibbons Preston.	Lyman D. Wilcutt & Son.	2,000 1sts
Power House, Charleston Navy Yard.	Frank O. Maxon, U. S. Engineer.	Woodbury & Leighton.	20,000 2ds
Adams House.	Wm. Whitney Lewis.	Lyman D. Wilcutt & Son.	12,000 1sts
Boston Wharf Co.	Morton D. Safford.	W. L. Clark & Co.	40,000 1sts
Babcock & Wilcox, Enameled Brick for their boilers at Boston Elevated R'y Co., Boston; Charleston Navy Yard, Lowell Manufacturing Co., Lawrence Manufacturing Co., Lowell and the Merrimac Manufacturing Co., at Lowell; also American Bell Telephone Co., Boston.			5,000 1sts 2,500 2ds

MASSACHUSETTS AND NEW ENGLAND STATES

BUILDING.	ARCHITECT.	BUILDER.	QUANTITY.
Mrs. Geo. Westinghouse, swimming tank and baths, also lining of workshop of electric station, Lenox, Mass.	M. L. Ryder Building Co.	M. L. Ryder Building Co.	25,000 1sts
Highland Grammar School, Holyoke, Mass.	W. B. Reid.	D. O'Connell's Sons.	8,000 2ds
Mt. Holyoke Spring Water Co. (Spring Water Well), Holyoke, Mass.			3,000 1sts
Knoxville Water Co., Knoxville, Tenn.	Wm. Wheeler, Boston, Engineer.		15,000 2ds
Cochrane Chemical Co., Chemical Tanks, Everett, Mass.	Cochrane Chem. Co., Constructors.		1,200 1sts
Bailey Oven Co., bakeries at Worcester, Springfield, Boston and Brockton, Mass., and Bangor, Me.			4,000 1sts 4,000 2ds
Pierce School, Brookline, Mass.	J. A. Schweinfurth.	Johnson Bros.	15,000 1sts
Town Hall, Brookline, Mass.	Wm. Gibbons Preston.	Johnson Bros.	2,500 1sts
Newton National Bank, Newton, Mass.	Wm. Gibbons Preston.	H. F. Ross Co.	500 1sts

MASSACHUSETTS AND NEW ENGLAND STATES—Continued

BUILDING.	ARCHITECT.	BUILDER.	QUANTITY.
Charles E. Riley Residence (brick for conservatory), Newton, Mass.		H. F. Ross Co.	2,000 1sts
City Hospital, Worcester, Mass.	G. I. Rockwood, Engineer.	Urgel Jacques, Contractor.	16,000 2ds
Worcester Insane Asylum.			3,000 2ds
Subway Fitchburg R'y Co., Fitchburg, Mass.	A. S. Cheever, Engineer.	Holbrook, Cabot & Daly.	15,000 1sts
Union Market National Bank, Watertown, Mass.	Chas. Brigham.	A. B. Murdough.	3,000 1sts
The Cantabrigia, Cambridge, Mass.	Arthur H. Vinal.	Hy. A. Bellamy.	8,000 2ds
A. D. Club (Harvard College).	J. Harleston Parker.	C. A. Dodge & Co.	10,000 1sts
Electric Light Station.	Stone & Webster, Engineers.	Wm. Pray, contractor.	800 1sts
Lincoln Water Board, Lincoln, Mass.	Geo. F. Newton.	J. M. & C. J. Buckley.	3,000 2ds
United States Naval Hospital, Chelsea, Mass.	Frank O. Maxon, U. S. Engineer.	C. A. Dodge Construction Co.	10,000 1sts
Fort Banks, Winthrop, Mass.	Col. Chas. R. Suter, Engineer.		5,000 2ds
Receiving Tomb at New Morningside Cemetery, Brattleboro, Vt.	Chas. E. Paige.	Temple Bros.	1,200 1sts
General Electric Co., Lynn, Mass		Thayer & Co.	1,500 1sts
Portsmouth Navy Yard, Portsmouth, N. H.	U. S. Engineers.	John Peirce, Contractor.	40,000 1sts
Residence Ex-Governor Lippett, Newport, R. I.	H. T. Robertson.	Maguire & Penniman.	5,000 1sts
Oelrich Residence, Newport, R. I.	McKim, Mead & White.	Norcross Bros.	25,000 2ds
Plymouth Cordage Co. (brick used in sanitary rooms of mill and engine rooms), Plymouth, Mass.	Lockwood, Greene & Co.	Flynt Construction Co.	40,000 1sts & 2ds
Rhode Island Hospital, Providence, R. I.	Stone, Carpenter & Wilson.	Jas. C. Goff.	20,000 2ds
William Street School House, Springfield, Mass.	Guy Kirkham.	D. M. Mellen.	8,000 1sts
Chilton House, Bar Harbor, Me.	A. W. Longfellow, Jr.	J. H. Buttimer.	1,000 1sts
Receiving Tomb, Lawrence, Mass.		Langdon E. Locke.	5,000 1sts
Fort Strong, Boston Harbor, Mass.	Col. Chas. R. Suter, Engineer.		3,000 1sts
Fort Heath, Boston Harbor, Mass.	Col. Chas. R. Suter, Engineer.		3,000 1sts
Convent, Worcester, Mass.	P. W. Ford.	J. A. McDermott.	2,000 1sts
Kilborn and Jordan Tombs, Portland, Me.		Union Granite Co	1,000 1sts
Weldon National Bank, St. Albans, Vt.	W. R. B. Wilcox.	Thos. W. Rogers.	1,400 1sts

DOMINION OF CANADA

BUILDING.	ARCHITECT.	BUILDER.	QUANTITY.
Banque d'Hockelaga, Montreal, Canada (repair job, where English and Scotch brick were originally used).	A. Raza.	O. D. Deguise.	2,000
F. W. Moleson's Stables, Montreal, Canada.	R. A. Finlay.	Amos Cowan.	8,000 1sts
Royal Victoria Hospital, Montreal, Canada.	Taylor & Gordon.	Amos Cowan.	20,000 1sts
C. R. Hosmer, Private Stable, Montreal, Canada.	E. Maxwell.	Amos Cowan.	10,000

SUMMARY

PARTIAL LIST OF PROMINENT WORKS

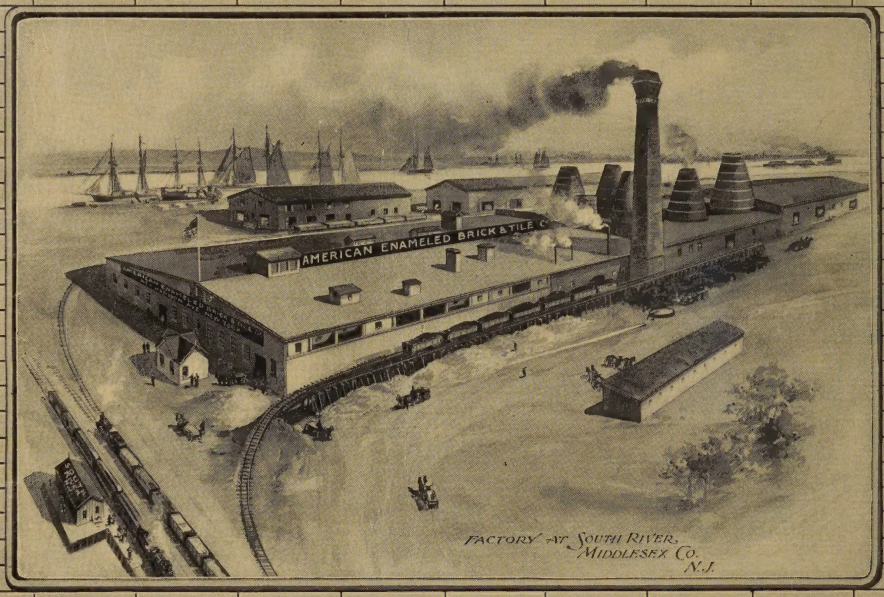
17	Private Stables	542,000
11	Office Buildings	842,500
12	Hospitals	450,000
16	Pumping and Power Stations	491,800
12	University and School Buildings	385,000
7	Manufacturing Plants	144,000
8	Clubs, Gymnasiums and Athletic Buildings	205,000
6	Homes and Asylums	250,000
6	Conservatories	70,000
5	Railroad Depots	607,000
5	Banks	21,900
4	Forts and Armories	13,000
3	Hotels	15,000
3	Public Park Comfort Stations	20,000
5	Tombs	12,775
		3,956,175

Output 1895 to 1901	6,500,000
Contracts reported above	3,956,175
Present capacity, 1901, per annum	2,000,000

AVERY LIBRARY
COLUMBIA UNIVERSITY

AGENTS.

NAME.	ADDRESS.	TERRITORY.
Meeker, Carter & Booraem.	1 Madison Avenue, New York City.	New York City and So. N.Y. State.
J. W. Hahn.	166 Devonshire Street, Boston, Mass.	New England.
John Herbert Corning, "The Tile Shop."	520 13th Street, Washington, D. C.	Maryland and District of Columbia.
J. B. Marie.	Real Estate and Trust Co. Bldg., Philadelphia, Pa.	Eastern Pennsylvania.
Gerard R. Vogel.	8 Builders' Exchange, Philadelphia, Pa.	Eastern Pennsylvania.
Cleveland Builders' Supply Co.	Garfield Building, Cleveland, Ohio.	Cleveland, Ohio.
Duncan & Porter.	315 Sandusky Street, Allegheny, Pittsburg, Pa.	Western Pennsylvania.
Wm. P. Felt.	New Britain, Conn.	Connecticut.
Moore's Lime Co.	237 West 4th Street, Cincinnati, Ohio.	Cincinnati, Ohio.
Progress Pressed Brick & Machine Co.	Kingshighway and Oak Hill, St. Louis, Mo.	St. Louis, Mo.
L. W. Edler.	Williamsport, Pa.	North Eastern Pa.
John Mann.	Richmond, Va.	Richmond, Va.
	FOREIGN.	
W. McNally & Co., Gn'l	52 McGill Street.	Montreal, Canada.
Hugh Cameron, Spec'l	57 Canada Life Ins. Bldg.	Montreal, Canada.
Chas. Lunn,	Winnepeg, Manitoba.	Canada.
Chas. Dobson & Co.	Sidney, N. S. Wales.	Australia.



FACTORY AT SOUTH RIVER,
MIDDLESEX CO.
N.J.